

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 095 - 02410 County Tyler District Meade
Quad Middlebourne 7.5' Pad Name Neat Pad Field/Pool Name -----
Farm name Roger R. Weese Well Number Jim Unit 3H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4363562m Easting 505376m
Landing Point of Curve Northing 4362276.29m Easting 505393.52
Bottom Hole Northing 4360292m Easting 506112m

Elevation (ft) 1005' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 4/13/2017 Date drilling commenced 11/15/2017 Date drilling ceased 10/20/2018
Date completion activities began 12/14/2018 Date completion activities ceased 4/1/2019
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 100', 121', 166' Open mine(s) (Y/N) depths No
Salt water depth(s) ft None Identified Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 1441' Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) No

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No

Reviewed

Reviewed by:

geb
6/24/2019

API 47-095 - 02410 Farm name Roger R. Weese Well number Jim Unit 3H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	105'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	373'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2619'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	17654'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6564'		4.7#, N-80		
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	204 sx	15.6	1.18	120	0'	8 Hrs.
Surface	Class A	320 sx	15.6	1.18	826	0'	8 Hrs.
Coal							
Intermediate 1	Class A	880 sx	15.6	1.18	1181	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	670 sx (Lead) 1740 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)		-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 17674' MD, 6372' TVD (BHL), 6381' (Deepest Point Drilled) Loggers TD (ft) 17674' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6200'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

Conductor - 0
 Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface
 Intermediate - 1 above float joint, 1 above float collar, 1 every 4th joint to surface
 Production - 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED N/A

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API 47- 095 . 02410 Farm name Roger R. Weese Well number Jim Unit 3H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6274' (TOP)</u>	<u>TVD</u>	<u>6621' (TOP)</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 7448 mcfpd Oil 143 bpd NGL --- bpd Water 11 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal Wireline Services
Address 381 Colonial Manor Road City North Huntington State PA Zip 15642

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature  Title Permitting Agent Date 6/10/2019

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	1/27/2019	17496.1		60	Marcellus
2	1/27/2019	17299.174	17465.279	60	Marcellus
3	1/27/2019	17102.248	17268.353	60	Marcellus
4	1/28/2019	16905.322	17071.427	60	Marcellus
5	1/28/2019	16708.396	16874.501	60	Marcellus
6	1/29/2019	16511.47	16677.575	60	Marcellus
7	1/29/2019	16314.544	16480.649	60	Marcellus
8	1/29/2019	16117.618	16283.723	60	Marcellus
9	1/29/2019	15920.692	16086.797	60	Marcellus
10	1/30/2019	15723.766	15889.871	60	Marcellus
11	1/30/2019	15526.84	15692.945	60	Marcellus
12	1/31/2019	15329.914	15496.019	60	Marcellus
13	2/2/2019	15132.988	15299.093	60	Marcellus
14	2/2/2019	14936.062	15102.167	60	Marcellus
15	2/3/2019	14739.136	14905.241	60	Marcellus
16	2/3/2019	14542.21	14708.315	60	Marcellus
17	2/3/2019	14345.284	14511.389	60	Marcellus
18	2/3/2019	14148.358	14314.463	60	Marcellus
19	2/4/2019	13951.432	14117.537	60	Marcellus
20	2/4/2019	13754.506	13920.611	60	Marcellus
21	2/4/2019	13557.58	13723.685	60	Marcellus
22	2/4/2019	13360.654	13526.759	60	Marcellus
23	2/4/2019	13163.728	13329.833	60	Marcellus
24	2/5/2019	12966.802	13132.907	60	Marcellus
25	2/5/2019	12769.876	12935.981	60	Marcellus
26	2/5/2019	12572.95	12739.055	60	Marcellus
27	2/5/2019	12376.024	12542.129	60	Marcellus
28	2/5/2019	12179.098	12345.203	60	Marcellus
29	2/5/2019	11982.172	12148.277	60	Marcellus
30	2/6/2019	11785.246	11951.351	60	Marcellus
31	2/6/2019	11588.32	11754.425	60	Marcellus
32	2/8/2019	11391.394	11557.499	60	Marcellus
33	2/8/2019	11194.468	11360.573	60	Marcellus
34	2/9/2019	10997.542	11163.647	60	Marcellus
35	2/9/2019	10800.616	10966.721	60	Marcellus
36	2/9/2019	10603.69	10769.795	60	Marcellus
37	2/9/2019	10406.764	10572.869	60	Marcellus
38	2/10/2019	10209.838	10375.943	60	Marcellus
39	2/10/2019	10012.912	10179.017	60	Marcellus
40	2/10/2019	9815.986	9982.091	60	Marcellus
41	2/10/2019	9619.06	9785.165	60	Marcellus
42	2/11/2019	9422.134	9588.239	60	Marcellus
43	2/11/2019	9225.208	9391.313	60	Marcellus
44	2/11/2019	9028.282	9194.387	60	Marcellus
45	2/11/2019	8831.356	8997.461	60	Marcellus
46	2/12/2019	8634.43	8800.535	60	Marcellus
47	2/12/2019	8437.504	8603.609	60	Marcellus
48	2/12/2019	8240.578	8406.683	60	Marcellus
49	2/13/2019	8043.652	8209.757	60	Marcellus
50	2/13/2019	7846.726	8012.831	60	Marcellus
51	2/13/2019	7649.8	7815.905	60	Marcellus
52	2/13/2019	7452.874	7618.979	60	Marcellus
53	2/14/2019	7255.948	7422.053	60	Marcellus
54	2/14/2019	7059.022	7225.127	60	Marcellus
55	2/14/2019	6862.096	7028.201	60	Marcellus
56	2/14/2019	6665.17	6831.275	60	Marcellus

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API 47-095-02410 Farm Name Roger R. Weese Well Number Jim Unit 3H

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbbls)	Amount of Nitrogen/ other (units)
1	1/27/2019	72.31	8081	6846	3757	180150	5528.738	N/A
2	1/27/2019	69	7949	6094	3583	404660	8485.333	N/A
3	1/27/2019	75.46	8285	6271	3860	406420	8317.81	N/A
4	1/28/2019	73.82	8312	6008	4177	411700	8310.976	N/A
5	1/28/2019	75.48	7510	6011	3545	403840	8376.833	N/A
6	1/29/2019	74.39	8368	5845	3867	407180	8314.095	N/A
7	1/29/2019	70.28	8154	8165	3762	406120	8130.5	N/A
8	1/29/2019	73.08	8310	5206	3531	403420	8193.857	N/A
9	1/29/2019	74.19	8253	4865	3363	406100	8269.905	N/A
10	1/30/2019	75.08	8144	5570	3487	404740	8213.905	N/A
11	1/30/2019	78.97	8601	5856	3863	404440	8351.19	N/A
12	1/31/2019	72.74	8743	5843	3683	399760	8376.929	N/A
13	2/2/2019	73.62	8162	5875	3643	413040	8196.571	N/A
14	2/2/2019	79.66	8252	5901	3936	410480	8281.929	N/A
15	2/3/2019	78.55	8340	6069	3757	398840	8048.143	N/A
16	2/3/2019	75.3	7844	5967	3693	399940	7989.738	N/A
17	2/3/2019	77.6	7862	5849	3889	400160	8171	N/A
18	2/3/2019	80.24	7813	3855	3920	403240	8135.238	N/A
19	2/4/2019	77.73	7864	5973	4077	405900	8380.738	N/A
20	2/4/2019	77.6	7945	5823	3758	403380	8264.786	N/A
21	2/4/2019	76.9	8009	5565	3694	401480	8042.595	N/A
22	2/4/2019	79.9	7985	5705	4048	400740	8104.333	N/A
23	2/4/2019	79.33	7990	5768	4062	410440	8061.881	N/A
24	2/5/2019	80.18	7852	5948	4141	402820	8285.881	N/A
25	2/5/2019	80.2	7683	6013	3618	408000	8223.452	N/A
26	2/5/2019	81.1	7573	5769	3848	405620	8112.333	N/A
27	2/5/2019	80.8	7950	5686	3840	406660	8048.167	N/A
28	2/5/2019	80.92	7826	5491	3950	412480	8233.595	N/A
29	2/5/2019	80.19	7760	5566	4223	406540	7948.262	N/A
30	2/6/2019	80.16	7734	5401	4267	410460	8233.857	N/A
31	2/6/2019	80.8	7727	5502	4004	407460	7958.929	N/A
32	2/8/2019	80.5	7620	5757	4088	409320	8048.929	N/A
33	2/8/2019	81.3	7618	5810	3746	406720	8222	N/A
34	2/9/2019	80.87	7683	5748	3956	407740	8237.595	N/A
35	2/9/2019	81.6	7918	5427	3994	400800	8513.262	N/A
36	2/9/2019	82.4	7822	5706	4047	403580	8241.5	N/A
37	2/9/2019	80.56	7569	5560	3918	404440	8244.857	N/A
38	2/10/2019	80.78	7680	5794	3691	407540	8104.714	N/A
39	2/10/2019	81.7	7562	4542	3502	403700	8199.405	N/A
40	2/10/2019	80.8	7676	4681	3624	408580	8146.214	N/A
41	2/10/2019	79.65	7591	5270	3736	401500	8124.833	N/A
42	2/11/2019	79.56	7422	5229	3959	403780	8108.452	N/A
43	2/11/2019	82.8	7689	5478	4973	403520	8124.024	N/A
44	2/11/2019	82.5	7707	5347	4689	404500	8072.214	N/A
45	2/11/2019	81.95	7455	5628	3948	411380	8270.262	N/A
46	2/12/2019	80.55	7323	6516	3592	405280	8212.095	N/A
47	2/12/2019	83	7460	6635	3683	403720	8076.048	N/A
48	2/12/2019	83	7549	6130	3654	403080	8047.595	N/A
49	2/13/2019	82.16	7741	6885	3806	401380	8333.095	N/A
50	2/13/2019	79.4	7281	6679	3689	406700	8319.31	N/A
51	2/13/2019	82.2	7283	5643	3716	404540	7862.667	N/A
52	2/13/2019	77.27	7072	5573	4306	409440	9153.071	N/A
53	2/14/2019	79.78	7392	6293	4101	406880	7990.881	N/A
54	2/14/2019	80.1	7095	6210	3719	404820	7903.881	N/A
55	2/14/2019	79.2	7016	5485	4096	406640	7960.476	N/A
56	2/14/2019	82.64	6919	5764	3388	404440	8240.881	N/A
		78.3	7,909	5,695	3,883	18,023,310	366,250	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Silty Sandstone	0	190	0	190
Sandy siltstone	190	290	190	290
Sandstone	290	600	290	600
Silty Sandstone	600	870	600	870
limey siltstone	870	945	870	945
silty sandstone, tr. coal	945	1,095	945	1,095
silty sandstone	1,095	1,490	1,095	1,490
silty shale	1,490	1,620	1,490	1,620
sandstone, tr coal	1,620	1,630	1,620	1,630
silty sandstone	1,630	1,670	1,630	1,670
sandstone	1,670	1,745	1,670	1,745
sandy shale	1,745	1,770	1,745	1,770
shaly sand	1,770	1,855	1,770	1,873
Big Lime	1,870	2,608	1,888	2,652
Fifty Foot Sandstone	2,608	2,727	2,652	2,775
Gordon	2,727	3,063	2,775	3,120
Fifth Sandstone	3,063	3,116	3,120	3,175
Bayard	3,116	3,888	3,175	3,973
Speechley	3,888	4,178	3,973	4,273
Balltown	4,178	4,534	4,273	4,643
Bradford	4,534	4,921	4,643	5,046
Benson	4,921	5,147	5,046	5,281
Alexander	5,147	6,176	5,281	6,409
Sycamore	6,027	6,152	6,219	6,385
Middlesex	6,152	6,236	6,385	6,527
Burkett	6,236	6,260	6,527	6,582
Tully	6,260	6,274	6,582	6,621
Marcellus	6,274	NA	6,621	NA

*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/27/2019
Job End Date:	2/14/2019
State:	West Virginia
County:	Tyler
API Number:	47-095-02410-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Jim Unit 3H
Latitude:	39.42146900
Longitude:	-80.93773300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,381
Total Base Water Volume (gal):	19,765,576
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	87.77739	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.20124	

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				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
				Crystalline silica, quartz	14808-60-7	100.00000	11.98479
				Hydrochloric acid	7647-01-0	15.00000	0.02277
				Inorganic salt	Proprietary	30.00000	0.01647
				Acrylamide acrylate polymer	Proprietary	30.00000	0.01647
				Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01647
				Ethylene glycol	107-21-1	60.00000	0.00892
				Guar gum	9000-30-0	100.00000	0.00629
				Glutaraldehyde	111-30-8	30.00000	0.00264
				Telmer	Proprietary	10.00000	0.00149
				Calcium chloride	10043-52-4	100.00000	0.00083
				Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00044
				Sodium persulfate	7775-27-1	100.00000	0.00020
				Sodium polyacrylate	9003-04-7	1.00000	0.00015
				Methanol	67-56-1	100.00000	0.00012
				Ethanol	64-17-5	1.00000	0.00009
				Strontium chloride	10476-85-4	5.00000	0.00004
				Potassium chloride	7447-40-7	5.00000	0.00004
				Modified thiourea polymer	Proprietary	30.00000	0.00003
				Sodium chloride	7647-14-5	2.00000	0.00002
				Phosphoric acid	7664-38-2	0.10000	0.00001
				Ethoxylated alcohols	Proprietary	5.00000	0.00001
				Propargyl alcohol	107-19-7	5.00000	0.00001
				Acrylic acid	79-10-7	0.01000	0.00000
				Sodium sulfate	7757-82-6	0.10000	0.00000

- * Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
- ** Information is based on the maximum potential for concentration and thus the total may be over 100%
- *** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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LATITUDE 39°27'30"

5,946'

3,550' TO BOTTOM HOLE
LATITUDE 39°25'00"

LONGITUDE 80°55'00"

13,420'

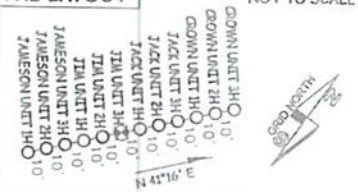
LONGITUDE 80°55'00"

Antero Resources Corporation
Well No. Jim Unit 3H
47-095-02410

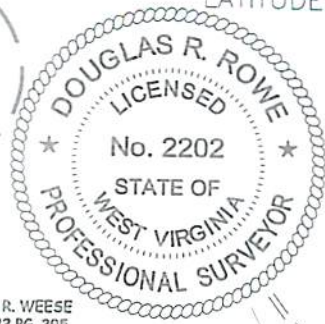
NOTES:
WELL 3H TOP HOLE INFORMATION:
 N: 338,875ft E: 1,593,856ft
 LAT: 39°25'17.37" LON: 80°56'15.77"
BOTTOM HOLE INFORMATION:
 N: 328,103ft E: 1,596,092ft
 LAT: 39°23'31.26" LON: 80°55'45.10"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.
 (NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
 N: 4,363,562m E: 505,376m
BOTTOM HOLE INFORMATION:
 N: 4,360,292m E: 506,112m

PAD LAYOUT

NOT TO SCALE



NOTE:
 NO WATER WELLS WERE LOCATED WITHIN 2000' OF CENTER OF PAD



WV NORTH ZONE GRID NORTH

STONE AT 3-WAY FENCE INTERSECTION

STONE, FOUND

- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOHN G. SPERRY ET AL
 D.B. 332 PG. 549
 T.M. 11 PAR. 11
 85.52 AC. ±

GRACE SEWELL DeCARLO LEASE

JAMES McCULLOUGH ET UX LEASE

RONALD P. FLETCHER ET AL
 D.B. 234 PG. 437
 T.M. 10 PAR. 01
 78 AC. ±

JOELYNN FAMILY TRUST LEASE
 VICTOR E. ADLER ET AL
 D.B. 206 PG. 510
 T.M. 11 PAR. 01
 48.45 AC. ±

FRANK GRASS ET AL LEASE
 STANLEY WALKER
 D.B. 334 PG. 264
 T.M. 11 PAR. 02
 54.62 AC. ±

FRANK GRASS ET AL
 D.B. 279 PG. 226
 T.M. 11 PAR. 14.3
 30 AC. ±

DENSEL FERRELL ET UX LEASE

RICHARD BARNARD
 D.B. 270 PG. 231
 T.M. 11 PAR. 12
 145.25 AC. ±

RONALD P. FLETCHER LEASE

RICHARD BARNARD
 D.B. 270 PG. 231
 T.M. 11 PAR. 13
 284.33 AC. ±

RICHARD HALL BARNARD LEASE

ROY D. HADLEY LEASE
 RONALD P. FLETCHER ET AL
 D.B. 193 PG. 39
 T.M. 07 PAR. 29
 170.25 AC. ±

LEEMAN W. MASON ET AL
 D.B. 271 PG. 494
 T.M. 08 PAR. 19
 37.69 AC. ±

CHRISTOPHER CARSE ET AL
 D.B. 330 PG. 892
 T.M. 08 PAR. 17
 10 AC. ±

CHARLES E. STULL ET UX LEASE
 CHARLES E. STULL ET AL
 D.B. 210 PG. 281
 T.M. 08 PAR. 18
 105 AC. ±

ROBERT CARSE ET AL
 D.B. 342 PG. 816
 T.M. 08 PAR. 16
 75 AC. ±

LEEMAN W. MASON ET UX LEASE

CHRISTOPHER CARSE ET AL
 D.B. 330 PG. 892
 T.M. 08 PAR. 25
 160.5 AC. ±

RONNIE LEE SMITH LEASE
 JAMES A. SMITH LEASE
 ROGER WEESE
 D.B. 336 PG. 99
 T.M. 08 PAR. 10
 32.17 AC. ±

STEVEN P. CARSE LEASE

RODNEY L. HAYES ET AL
 D.B. 318 PG. 497
 T.M. 08 PAR. 14
 54.94 AC. ±

LARRY S. STATHERS LEASE

WELL NO. 3H

ROGER R. WEESE
 D.B. 322 PG. 295
 T.M. 08 PAR. 09
 177.31 AC. ±

BARBARA RENNER
 D.B. 159 PG. 476
 T.M. 08 PAR. 09.2
 2 AC. ±

VIRGINIA KAY RIGGS ET AL
 A.R. 41 PG. 161
 T.M. 07 PAR. 06
 108.14 AC. ±

VIRGINIA RIGGS LEASE

JOB # 14-128WA
 DRAWING # JIM3HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
 - - - - - Surface Owner Boundary Lines +/-
 - - - - - Interior Surface Tracts +/-
 - - - - - Proposed Well Path
 - - - - - As Drilled Well Path
 DOUGLAS R. ROWE P.S. 2202
 DATE 06/04/19
 OPERATOR'S WELL# JIM UNIT #3H

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,005' - AS BUILT WATERSHED OUTLET MIDDLE ISLAND CREEK
 QUADRANGLE MIDDLEBOURNE 7.5' DISTRICT MEADE COUNTY TYLER
 SURFACE OWNER ROGER R. WEESE ACREAGE 177.31 ACRES +/-
 OIL & GAS ROYALTY OWNER ROGER R. WEESE; JAMES A. SMITH; RONNIE LEE SMITH; CHARLES E. STULL ET UX; LEEMAN W. MASON ET UX; GRACE SEWELL DeCARLO; ROY D. HADLEY; JAMES McCULLOUGH ET UX; JOELYNN FAMILY TRUST; RONALD P. FLETCHER; RICHARD HALL BARNARD
 OIL & GAS ROYALTY OWNER 198.709 AC±; 31.919 AC±; 97.544 AC±; 105 AC±; 37.69 AC±; 85.52 AC±; 170.25 AC±; 78 AC±; 52.5 AC±; 44.35 AC±; 284.33 AC±
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL
 FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PLUG & ABANDON CLEAN OUT & REPLUG PERFORATE NEW FORMATION
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,372' TVD 17,674' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

47 - 095 - 02410
 STATE COUNTY PERMIT